

Section 1-3: Distance and Midpoints

By the end of this lesson, you should be able to answer:

- How do you find the distance between two points?
- How do you find the midpoint of a segment?

Define the following:

1. Pythagorean Theorem

2. Distance

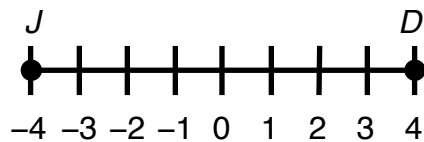
- Formula:

3. Midpoint

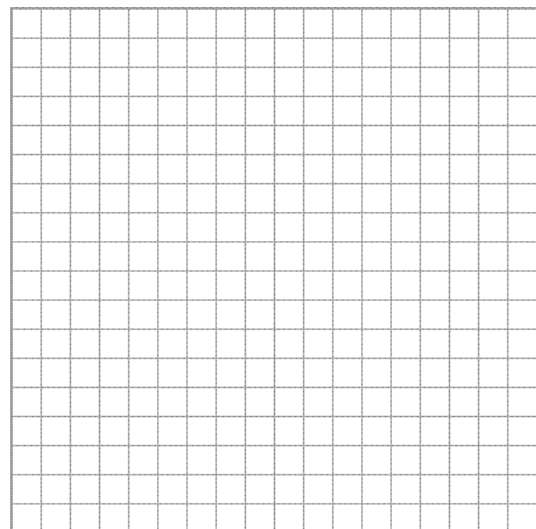
- Formula:

4. Segment Bisector

Example 1: Use the number line to find DJ .



Example 2: Graph $A(3, 2)$ and $B(6, 8)$. Then use the Pythagorean Theorem to find AB .

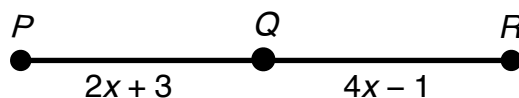


Example 3: Use the distance formula to find the distance between $A(3, 2)$ and $B(6, 8)$.

Example 4: Find the midpoint of \overline{AB} for points $A(3, 2)$ and $B(6, 8)$.

Example 5: Find the coordinates of U if $F(-2, 3)$ is the midpoint of \overline{UO} and O has coordinates of $(8, 6)$.

Example 6: Find PQ if Q is the midpoint of \overline{PR} .



Problem Set:

"Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning." - Albert Einstein